

USCG ANT PUERTO RICO

CHRISTIANSTED, ST. CROIX

U.S. VIRGIN ISLANDS



HS17B REBUILD CHRISTIANSTED HARBOR CHANNEL LIGHTS

(LT 7, 9, 10, 11, 13, DBN 16, & COAKLEY BAY LT1)

JUNE 2020

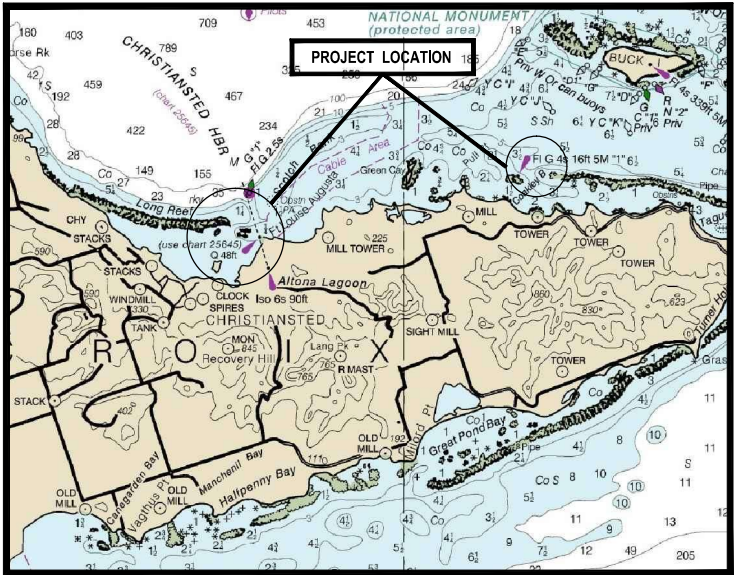


VICINITY MAP

SCALE: NOT TO SCALE



LIST OF DRAWINGS		
SHT. NO.	DISCIPLINE SHEET NO.	TITLE
GENERAL		
1	G-01	COVER SHEET
CIVIL		
2	C-01	OVERALL SITE PLAN
3	C-02	TOWER SITE PLANS
4	C-03	PHOTOGRAPHS
5	C-04	RANGE REMOVALS
STRUCTURAL		
6	S-01	STRUCTURAL NOTES
7	S-02	TOWER ELEVATIONS
8	S-03	TOWER PLANS
9	S-04	JACKET ELEVATIONS
10	S-05	JACKET SECTIONS
11	S-06	DETAILS - 1
12	S-07	DETAILS - 2
13	S-08	DETAILS - 3

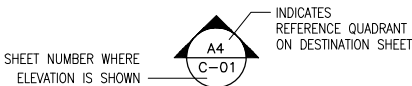


LOCATION MAP

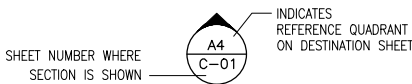
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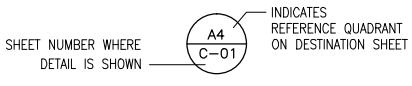
ELEVATION, SECTION OR DETAIL SYMBOLS



EXTERIOR ELEVATION/SECTION



INTERIOR ELEVATION/SECTION



DETAIL

4

TIDAL DATUMS (1983-2001 TIDAL EPOCH)*	
MEAN HIGHER HIGH WATER (MHHW)	0.74'
MEAN HIGHER WATER (MHW)	0.72'
MEAN SEA LEVEL	0.37'
MEAN LOW WATER (MLW)	0.03'
MEAN LOWER LOW WATER (MLLW)	0.00'
REFERENCE:	
NOAA/NOS TIDE STATION ID# 9751364, ST. CROIX, USVI	
NOTE:	
ALL ELEVATIONS REFERENCE MLLW UNLESS OTHERWISE NOTED	

1

LEGEND	
ATON	AIDS TO NAVIGATION
APPROX	APPROXIMATE
C	CENTER LINE
D	DIAMETER
EL	ELEVATION IN FEET
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
MIN	MINIMUM
NTS	NOT TO SCALE
R	PLATE
RAD	RADIUS
RFL	RANGE FRONT LIGHT
RRL	RANGE REAR LIGHT
SCH	SCHEDULE
SQ	SQUARE
TBD	TO BE DETERMINED
T.O.D.	TOP OF DECK
TYP	TYPICAL

2

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CIVIL ENGINEERING UNIT
MIAMI



USCG, CEU MIAMI
15608 SW 117TH AVE
MIAMI, FLORIDA 33177

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO:8021
CAD FILE NAME: M2329-D G01.DWG
DESIGNED BY: LAH
DRAWN BY: SND
EDITED BY: SND
CHECKED BY: NJE

SCALE:AS SHOWN PLOT SCALE:1:1
SHEET TITLE

HS17B REBUILD CHRISTIANSTED HARBOR CHANNEL LIGHTS
USCG ANT PUERTO RICO
ST. CROIX USVI

GENERAL
COVER SHEET

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
M.A. BRAXTON	E. SAN	M.J. LESINSKI
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

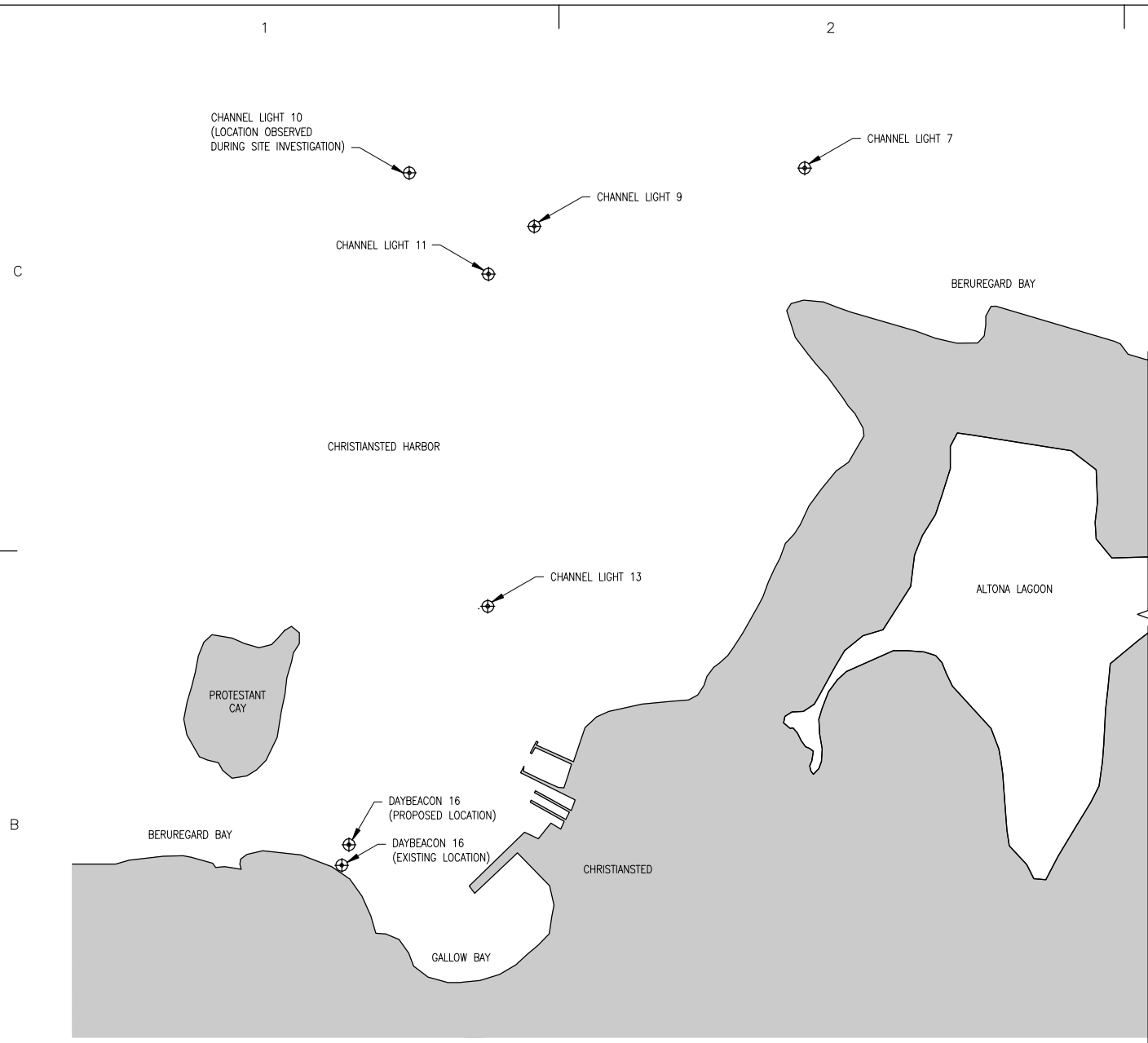
M.J. LESINSKI
APPROVING OFFICER DATE

PROJECT NUMBER DRAWING NUMBER

10251739 M2329-D

DISCIPLINE/SHT NO SHEET 1 OF 13

95% SUBMISSION



WEST SITE PLAN

SCALE: 1" = 400'-0"

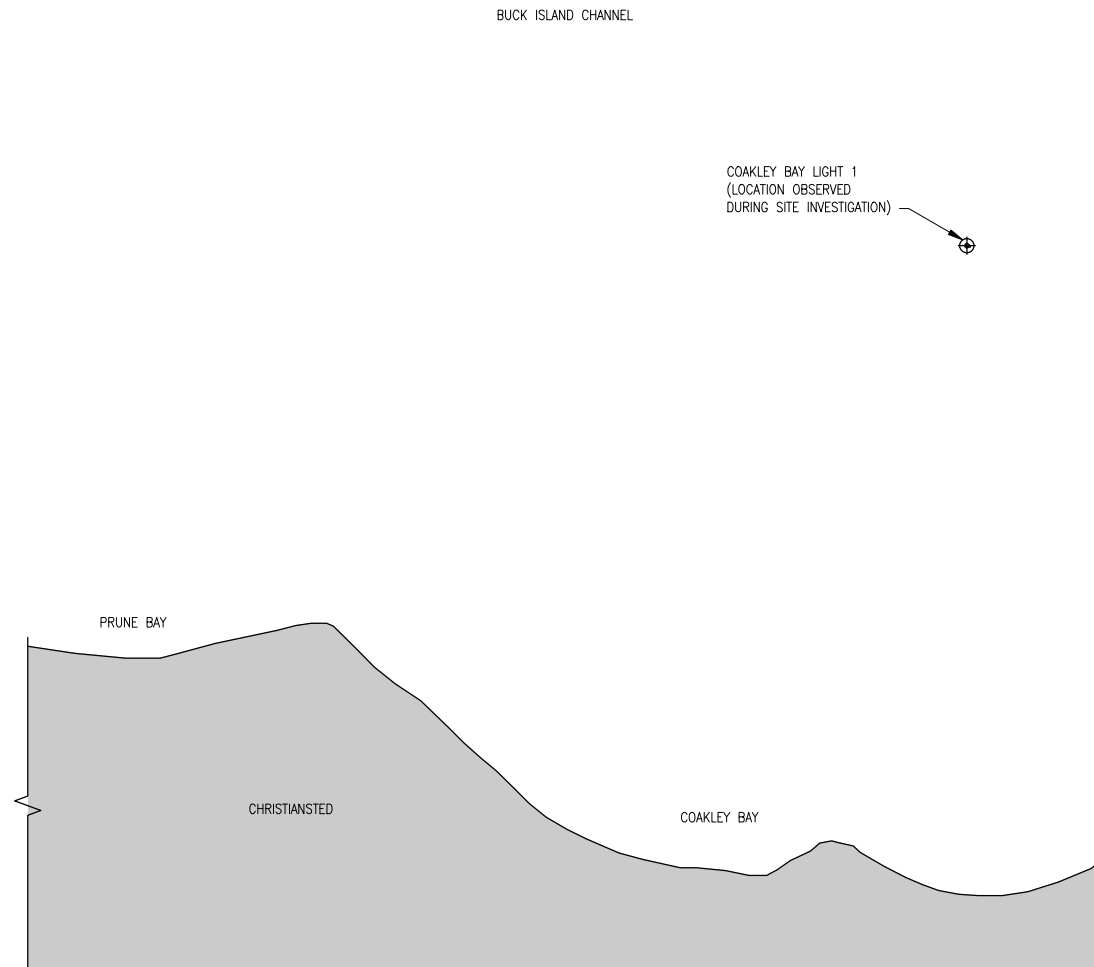


TOWER SUMMARY							
TOWER	NORTHING	EASTING	LATITUDE	LONGITUDE	WATER DEPTH	FOCAL HEIGHT	DECK ELEVATION
CHANNEL LIGHT 7	6,443,997.39	1,051,033.85	N 17 45 25.811	W 64 41 40.040	22 FT	16.72 FT	12.3 FT
CHANNEL LIGHT 9	6,433,698.22	1,049,647.10	N 17 45 22.721	W 64 41 54.360	18 FT	16.72 FT	12.3 FT
CHANNEL LIGHT 10	6,443,972.24	1,049,005.88	N 17 45 25.38	W 64 42 01.020	17 FT	17.72 FT	12.3 FT
CHANNEL LIGHT 11	6,443,453.22	1,049,411.85	N 17 45 20.271	W 64 41 56.771	12 FT	16.72 FT	12.3 FT
CHANNEL LIGHT 13	6,441,749.97	1,049,408.14	N 17 45 03.385	W 64 41 56.650	19 FT	16.72 FT	12.3 FT
DAYBEACON 16	6,440,527.31	1,048,696.33	N 17 44 51.200	W 64 42 03.900	19 FT	16.72 FT*	12.3 FT
COAKLEY BAY LIGHT 1	6,447,142.66	1,070,189.85	N 17 45 58.679	W 64 42 22.123	18 FT	16.72 FT	12.3 FT

* DAYBOARD HEIGHT

NOTE:

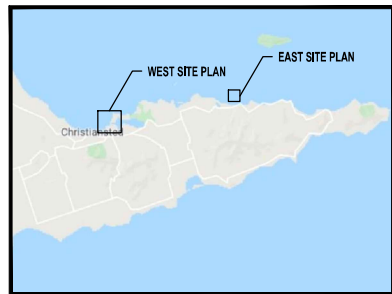
1. COORDINATES, AS PROVIDED BY USCG, REPRESENT THE LOCATION OF THE LANTERN SUPPORTED BY THE TOWER STRUCTURE. CHANNEL LIGHT 10 AND COAKLEY BAY COORDINATES BASED ON ABE FIELD INVESTIGATION. CONFIRM ALL COORDINATES PRIOR TO CONSTRUCTION.
2. WATER DEPTHS ARE BELOW MLLW AND ARE APPROXIMATE BASED ON LEAD LINE MEASUREMENTS REFERENCED TO THE WATER LEVEL AND CORRECTED FOR THE REPORTED TIDES FROM NOAA.
3. HORIZONTAL DATUM IS BASED ON GEOGRAPHIC COORDINATES (LAT/LONG), NORTH AMERICAN DATUM OF 1983 (NAD83).



EAST SITE PLAN

SCALE: 1" = 400'-0"







KEY PLAN

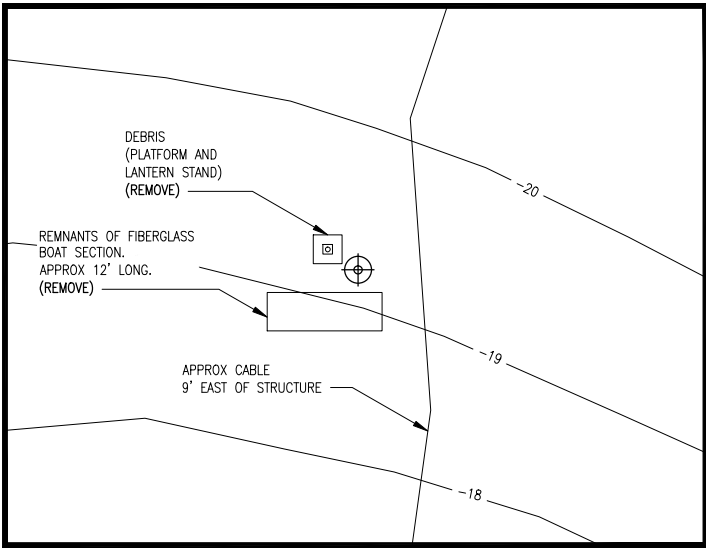
SCALE: NOT TO SCALE



 Appledore Marine Engineering, LLC 600 State Street, Suite E Portsmouth, New Hampshire 03801 (603) 766-1870 ame1@appledoremachine.com		
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USCG. CEU MIAMI 15608 SW 117TH AVE MIAMI, FLORIDA 33177		
ISSUE		
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DRAWN BY: SND		
EDITED BY: SND		
CHECKED BY: NJE		
SCALE: AS SHOWN PLOT SCALE: 1:1		
SHEET TITLE		
HS17B REBUILD CHRISTIANSTED HARBOR CHANNEL LIGHTS USCG ANT PUERTO RICO ST. CROIX USVI		
CIVIL SITE PLAN		
REVIEWED BY: M.A. BRAXTON	REVIEWED BY: E. SAN	REVIEWED BY: M.J. LESINSKI
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR
M.J. LESINSKI		
APPROVING OFFICER		DATE
PROJECT NUMBER 10251739		DRAWING NUMBER M2329-D
DISCIPLINE/SHT NO C-01		SHEET 2 OF 13

95% SUBMISSION

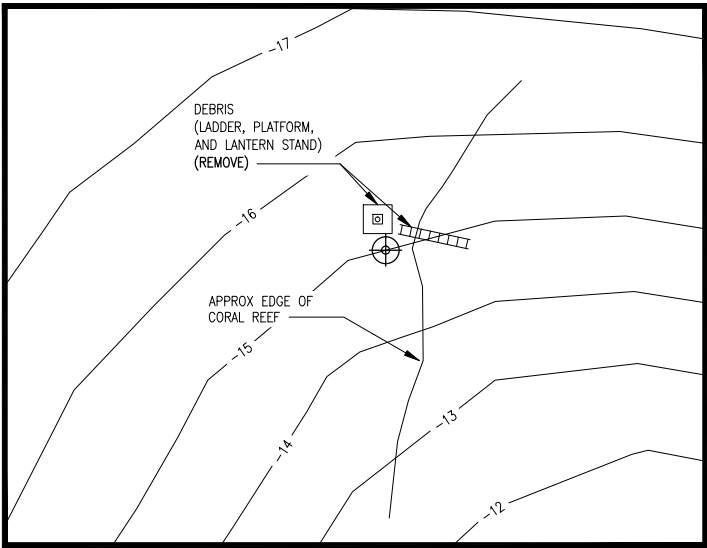
C



CHANNEL LIGHT 7

SCALE: 1"=10'-0" 0 10' 20'

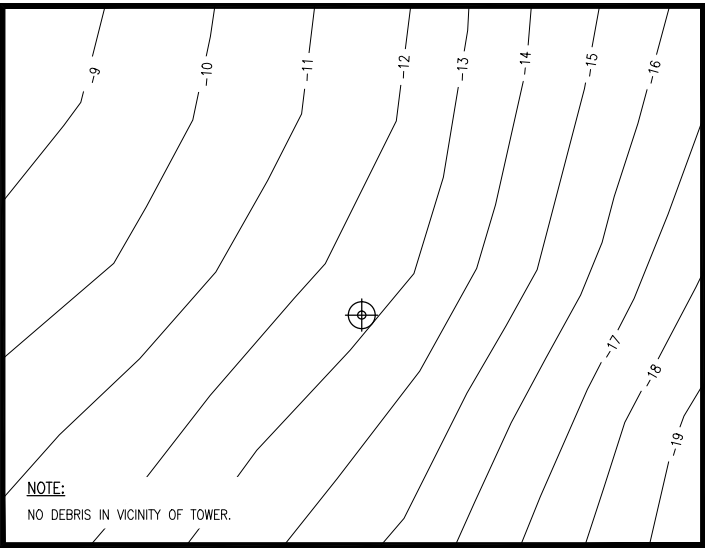
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CHANNEL LIGHT 9

SCALE: 1"=10'-0" 0 10' 20'

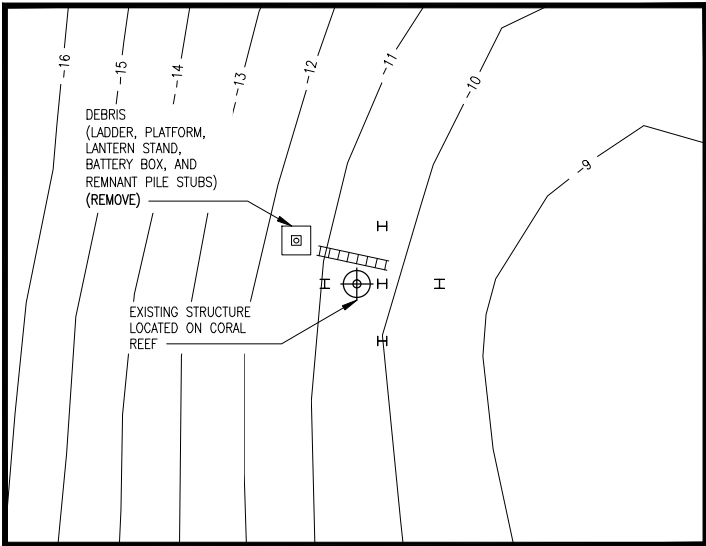
4



CHANNEL LIGHT 10

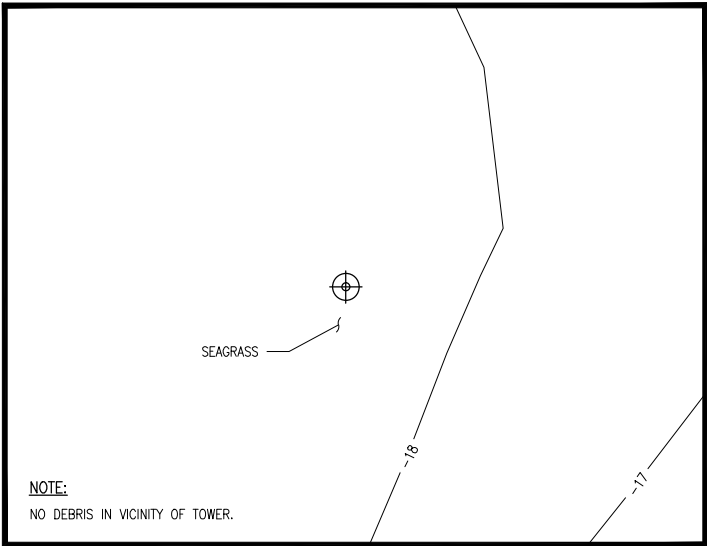
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B



CHANNEL LIGHT 11

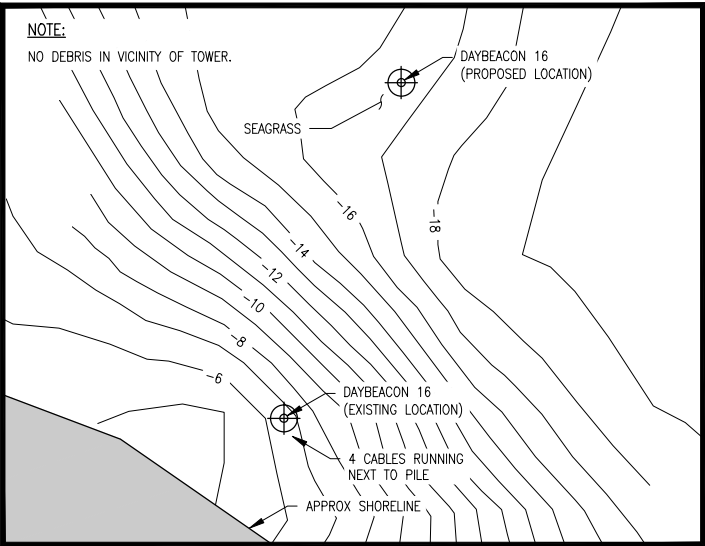
SCALE: 1"=10'-0" 0 10' 20'



CHANNEL LIGHT 13

SCALE: 1"=10'-0" 0 10' 20'

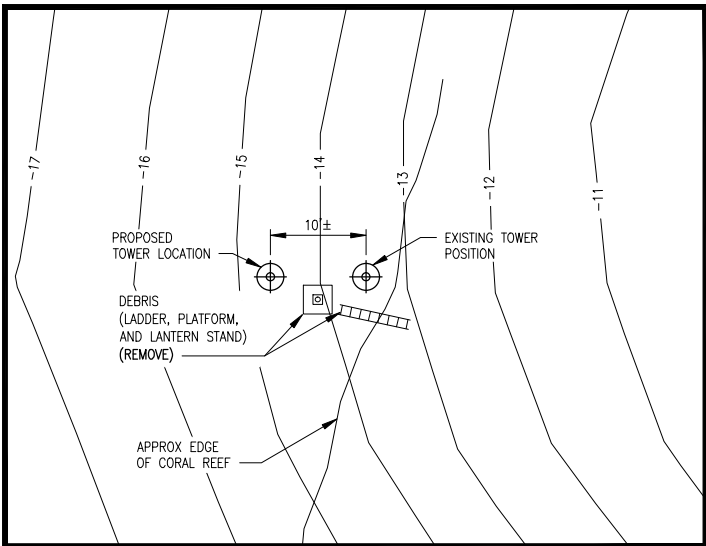
B



DAYBEACON 16

SCALE: 1"=30'-0" 0 30' 60'

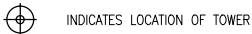
A



COAKLEY BAY LIGHT 1

SCALE: 1"=10'-0" 0 10' 20'

LEGEND:



INDICATES LOCATION OF TOWER

NOTES:

- HYDROGRAPHIC SURVEY WAS COMPLETED BY CRUZAN MARITIME SERVICES IN MARCH 2020. THE INFORMATION PRESENTED ON THIS DRAWING REPRESENTS THE RESULTS OF THE SURVEY PERFORMED AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME.
- DEBRIS WITHIN A 50 FOOT RADIUS OF THE EXISTING STRUCTURE MUST BE REMOVED AND DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS. DEBRIS GENERALLY CONSISTS OF FAILED TOWER PARTS AND ASSEMBLIES UNLESS NOTED OTHERWISE.
- DEBRIS IS SHOWN SCHEMATICALLY WITH APPROXIMATE SHAPES AND SIZES.



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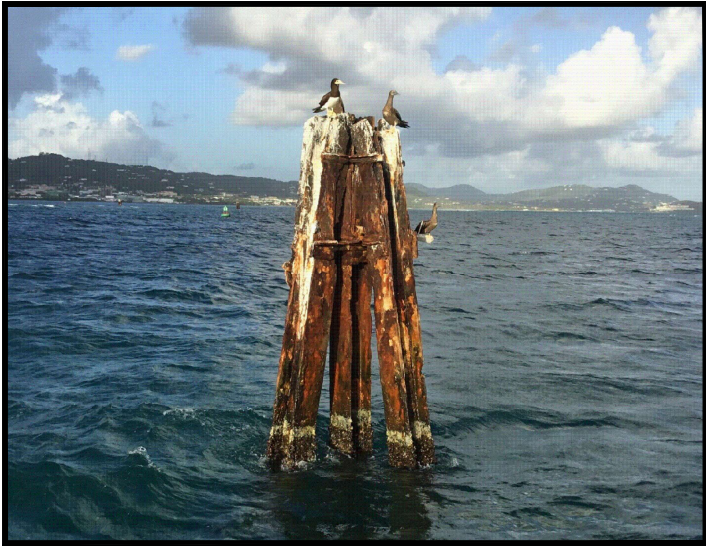
**CIVIL
TOWER SITE PLANS**

REVIEWED BY: M.A. BRAXTON	REVIEWED BY: E. SAN	REVIEWED BY: M.J. LESINSKI
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

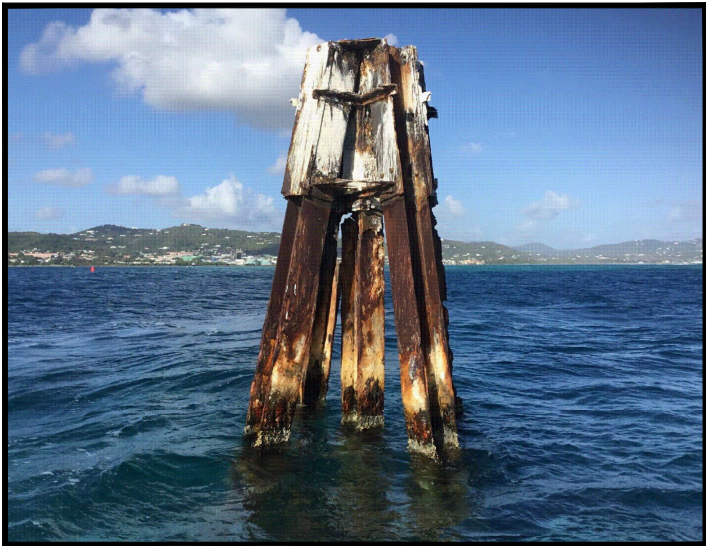
M.J. LESINSKI APPROVING OFFICER	DATE
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PROJECT NUMBER 10251739	DRAWING NUMBER M2329-D
DISCIPLINE/SHT NO C-02	SHEET 3 OF 13

95% SUBMISSION



C1 EXISTING CHANNEL LIGHT 7
SCALE: NTS



B1 EXISTING CHANNEL LIGHT 11
SCALE: NTS



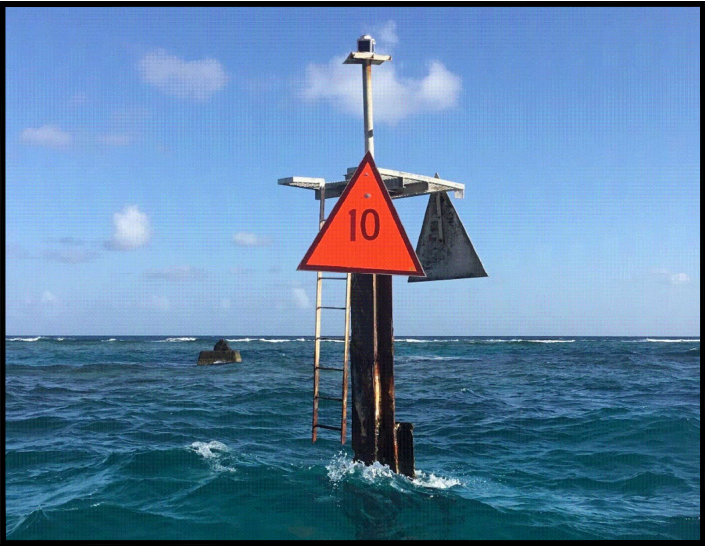
A1 EXISTING COAKLEY BAY LIGHT 1
SCALE: NTS



C2 EXISTING CHANNEL LIGHT 9
SCALE: NTS



B2 EXISTING CHANNEL LIGHT 13
SCALE: NTS




C3 EXISTING CHANNEL LIGHT 10
SCALE: NTS



B3 EXISTING DAYBEACON 16
SCALE: NTS




KEY PLAN
SCALE: NTS



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SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

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ST. CROIX USVI

CIVIL PHOTOGRAPHS

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
M.A. BRAXTON	E. SAN	M.J. LESINSKI
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

M.J. LESINSKI APPROVING OFFICER		DATE
PROJECT NUMBER		DRAWING NUMBER
10251739		M2329-D
DISCIPLINE/SHT NO		
C-03		SHEET 4 OF 13

95% SUBMISSION

ATON TOWER NOTES:

3. ALL DIMENSIONS, ELEVATIONS AND CONDITIONS SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE AFFECTED PART OF THE WORK.
2. CONTRACTOR SHALL MAINTAIN ADEQUATE SURVEY CONTROL AT ALL TIMES TO ESTABLISH AND MAINTAIN ALL LINES AND ELEVATIONS.
3. STRUCTURAL STEEL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE STEEL CONSTRUCTION MANUAL OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, UNLESS OTHERWISE DETAILED.
4. ALL STRUCTURAL STEEL SHAPES SHALL BE ASTM A572, GRADE 50 UNLESS OTHERWISE NOTED:
 - a. STEEL PIPE PILES, ASTM A252, GRADE 3 SEAMLESS OR STRAIGHT SEAM.
 - b. STEEL PIPE HANDRAILS ASTM A53, TYPE E OR S, GRADE B.
5. ALL STRUCTURAL MEMBERS AND CONNECTIONS SHALL BE PROVIDED WITH COATING AND CORROSION PROTECTION SYSTEM IN ACCORDANCE WITH THE SPECIFICATIONS.
6. SUBMIT DETAILED SHOP DRAWINGS TO THE CONTRACTING OFFICER FOR REVIEW AND APPROVAL PRIOR TO THE FABRICATION OR DELIVERY OF ANY STEEL.
7. ALL BOLTS SHALL BE ASTM A307 UNLESS NOTED OTHERWISE.
8. ALL CONNECTIONS SHALL BE MADE WITH A 5/16" FILLET WELD OR PARTIAL PENETRATION GROOVE WELD, UNLESS NOTED OTHERWISE. ALL WELDS REGARDLESS OF TYPE SHALL BE WELDED ALL AROUND AND CONFORMING TO AWS D1.1 AND BE MADE WITH E70-XX ELECTRODES. ALL WELDS TO COMPLETELY SEAL CONNECTIONS.
9. LIGHTNING PROTECTION SHALL HAVE A SINGLE AIR TERMINAL WITH TIP MOUNTED 10" HIGHER THAN THE HIGHEST POINT ON THE TOWER OR ANY APPURTENANCE.
10. OUTFIT ALL LADDERS WITH A CABLE SAFETY CLIMB SYSTEM.
11. DECKING SHALL BE FIBERGLASS REINFORCED PLASTIC (FRP) GRATING AND ANCHORED TO THE FRAMING USING PRE-WELDED STUDS TO PREVENT DAMAGE TO THE COATING SYSTEM.
12. ALL HANDRAILS, LADDERS AND OTHER SAFETY FEATURES SHALL MEET THE REQUIREMENTS OF OSHA.

STEEL TREATMENT NOTES:

1. THE INTEGRITY OF THE COATING SYSTEM IS PARAMOUNT TO THE DESIGN SERVICE LIFE AND REQUIRES SPECIAL CARE DURING CONSTRUCTION TO MINIMIZE DAMAGE.
2. THE PROJECT HAS BEEN SPECIFICALLY DESIGNED TO MINIMIZE FIELD WELDING AND THE EXPECTATION IS THAT ALL WELDING WILL BE COMPLETED IN THE FABRICATION SHOP PRIOR TO COATING.
3. APPURTENANCES SUCH AS THE GRATING, HANDRAILS, LIGHTS, ETC. SHALL BE FABRICATED WITH PRE-WELDED ATTACHMENT STUDS OR MALE/FEMALE CONNECTIONS TO ALLOW ATTACHMENT IN THE FIELD WITHOUT WELDING.
4. APPLY JOINT SEALANT TO BACK-TO-BACK STEEL BOLTED CONNECTIONS.

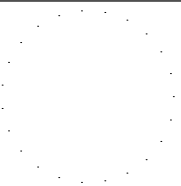
DESIGN INTENT NOTES:

1. THE PREFABRICATED STEEL JACKET PROVIDES CORROSION PROTECTION AND WILL ALSO BE USED AS A PILE DRIVING TEMPLATE TO ALLEVIATE THE NEED OF ADDITIONAL TEMPORARY FALSEWORK.
2. THE CENTRAL TUBE IN THE JACKET, IN CONJUNCTION WITH A TEMPORARY POSITIONING PILE (NOT SHOWN FOR CLARITY) SHALL BE USED TO LOCATE THE NEW TOWER STRUCTURE AND TO ORIENT/TEMPORARILY SUPPORT THE JACKET DURING BATTER PILE INSTALLATION.
3. DRIVE PIPE PILES THROUGH THE JACKET SLEEVES TO THEIR DESIGN TIP ELEVATION. CUT PILES 1' BELOW TOP OF JACKET AND GROUT THE ANNULUS BETWEEN THE JACKET AND PILES.
4. REMOVE THE TEMPORARY POSITIONING PILE ONCE THE BATTER PILES AND JACKET HAVE BEEN GROUTED.



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DESIGNED BY:	LAH
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SCALE: AS SHOWN PLOT SCALE: 1:1

TITLE

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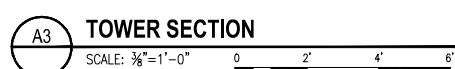
STRUCTURAL STRUCTURAL NOTES

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
M.A. BRAXTON	E. SAN	M.J. LESINSKI
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

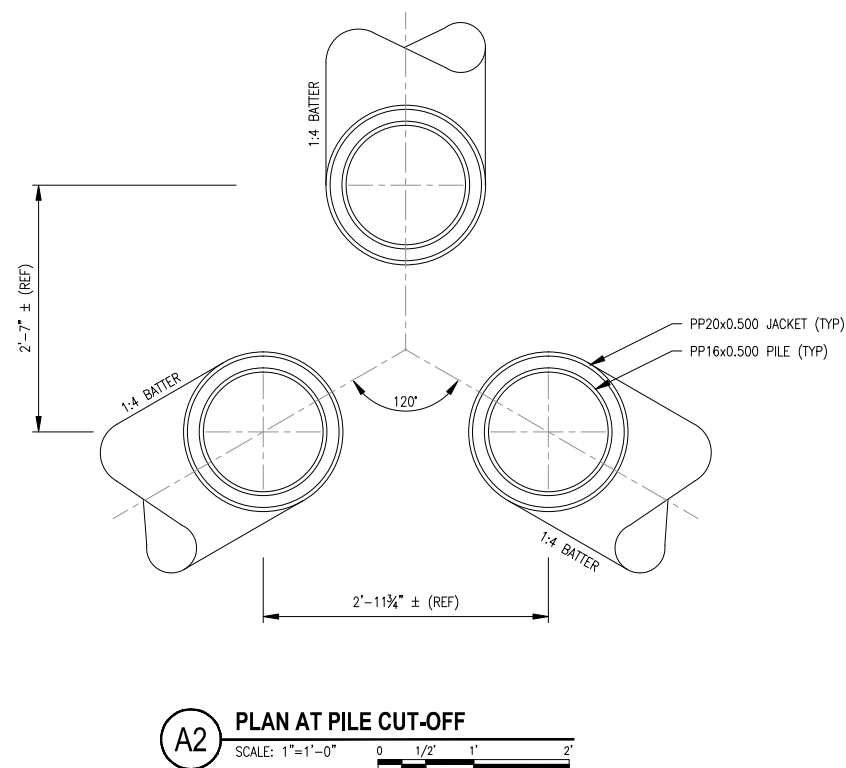
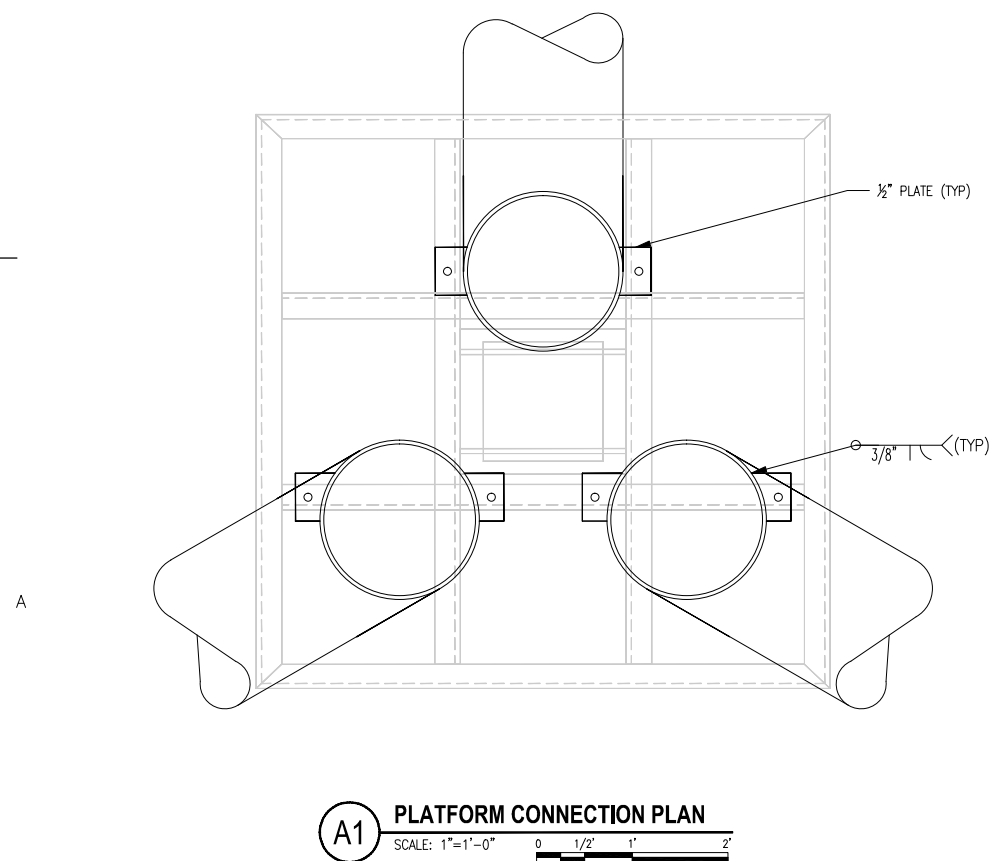
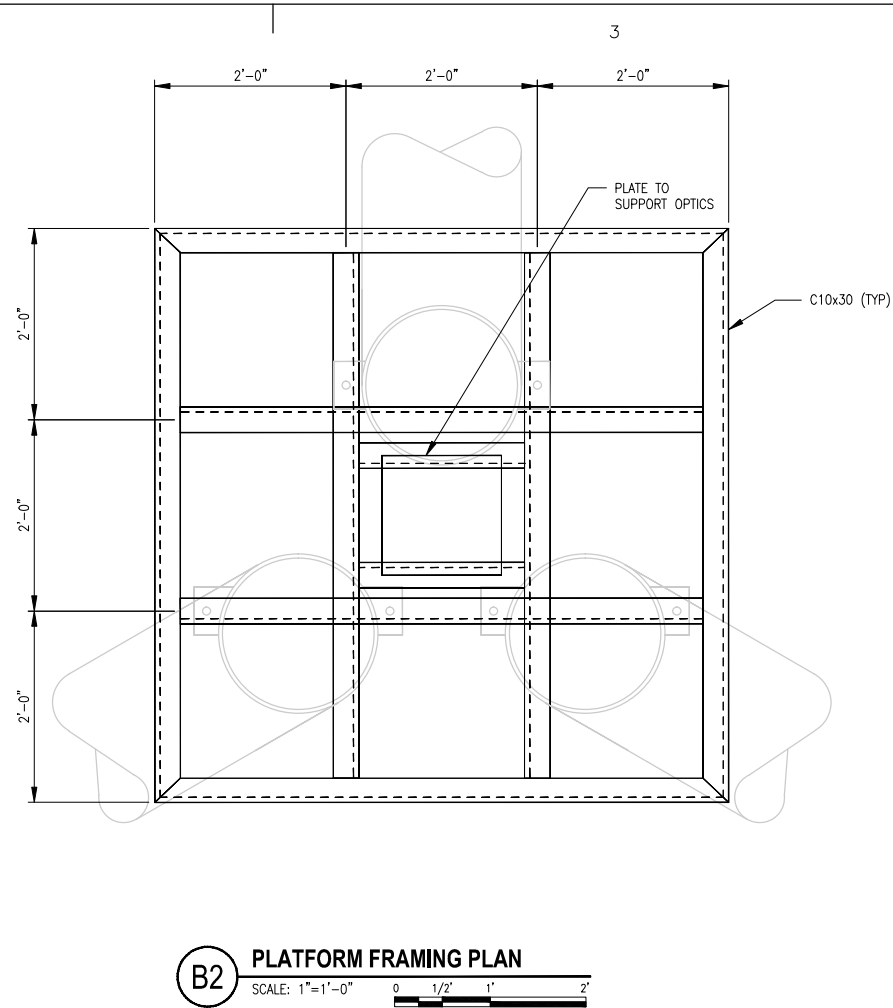
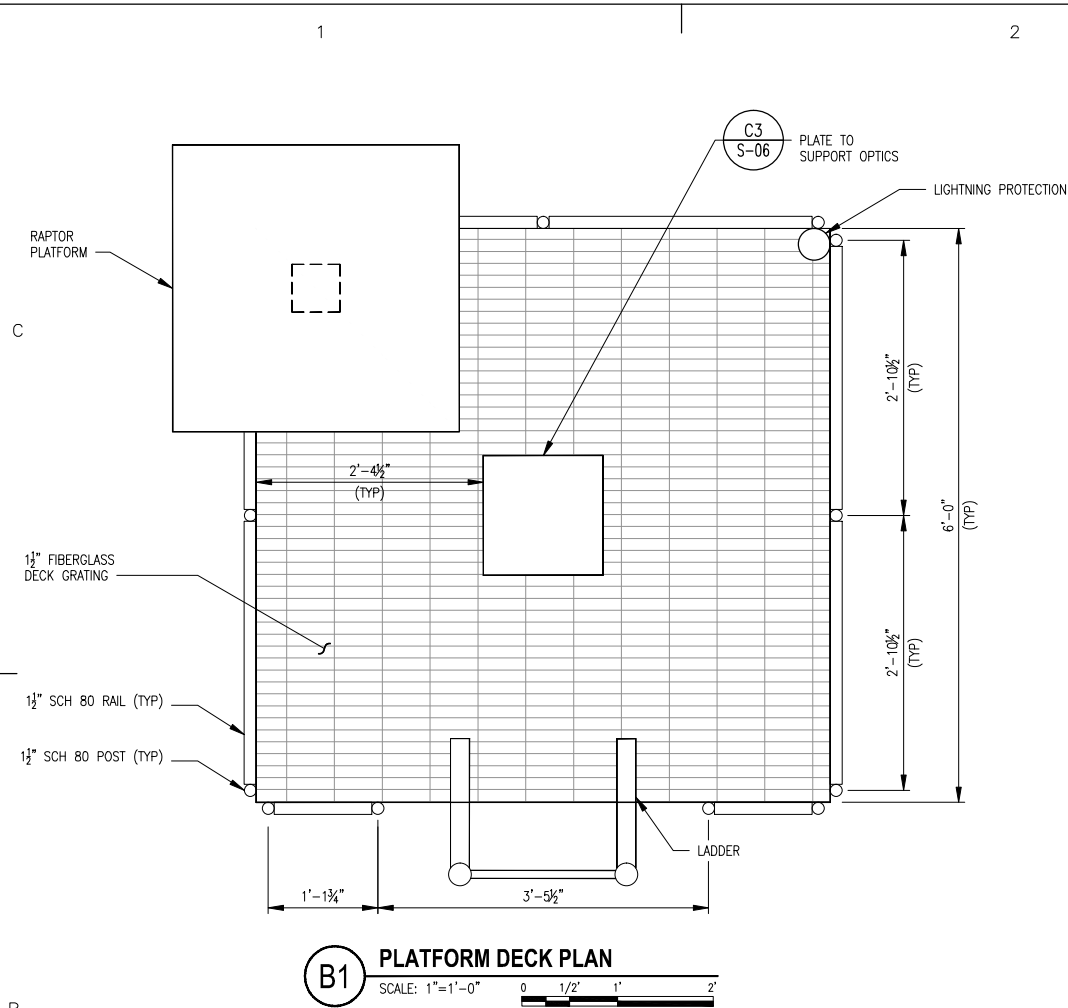
M.J. LESINSKI	
APPROVING OFFICER	DATE

PROJECT NUMBER	DRAWING NUMBER
10251739	M2329-D
DISCIPLINE/SHT NO	
S-01	SHEET 6 OF 13

95% SUBMISSION



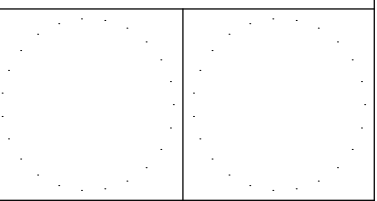
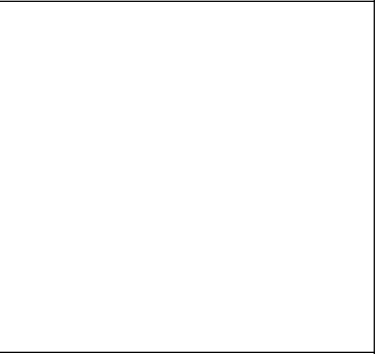
95% SUBMISSION



NOTE:

1. ORIENT EACH STRUCTURE SO THAT THE LADDER IS FACING THE CHANNEL TO PROVIDE DEEPWATER ACCESS FOR MAINTENANCE BOATS AND TO MINIMIZE OBSTRUCTIONS WITH LIGHTENING PROTECTION AND RAPTOR PLATFORM.

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ST. CROIX USVI

STRUCTURAL
JACKET ELEVATIONS

REVIEWED BY: M.A. BRAXTON	REVIEWED BY: E. SAN	REVIEWED BY: M.J. LESINSKI
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

M.J. LESINSKI APPROVING OFFICER	DATE
------------------------------------	------

PROJECT NUMBER	DRAWING NUMBER
10251739	M2329-D
DISCIPLINE/SHT NO	SHEET 9 OF 13
S-04	

95% SUBMISSION

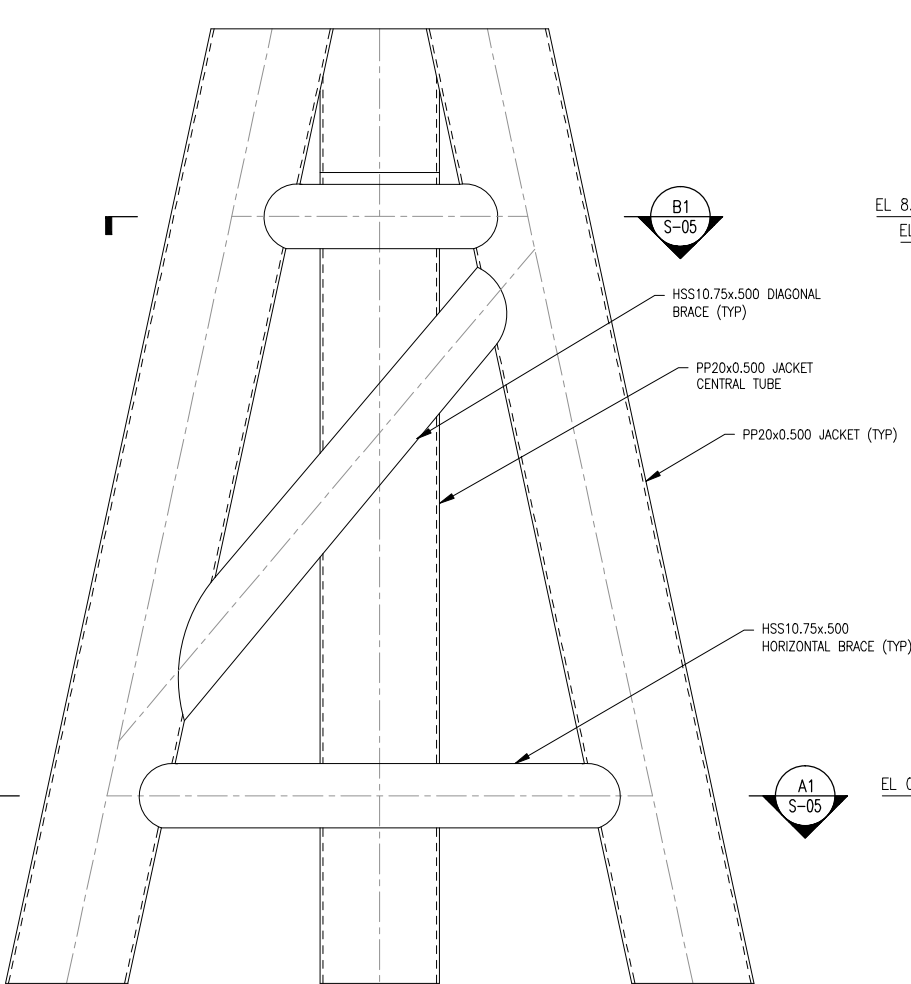
C

B

A

B

MHHW EL. 0.74'
MLLW EL. 0.0'



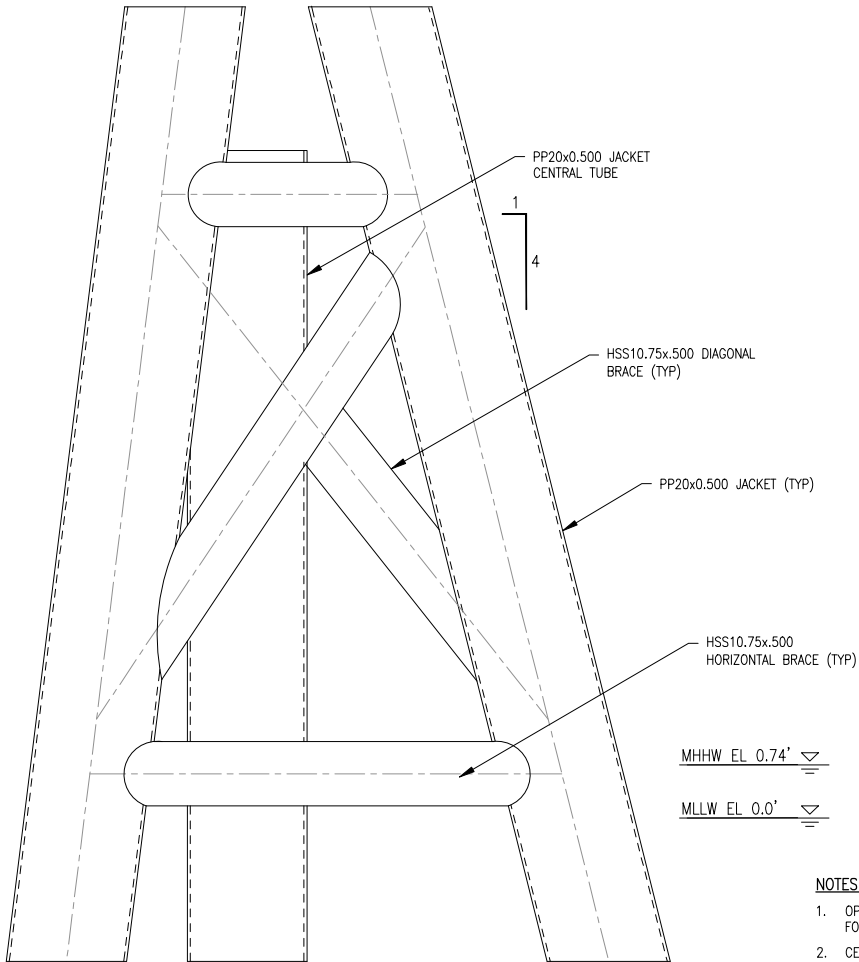
A1 ELEVATION
SCALE: 3/4"=1'-0" 0 1' 2' 3'

2

3

4

MHHW EL. 0.74'
MLLW EL. 0.0'

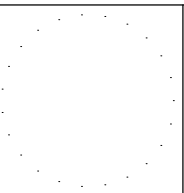


A3 ELEVATION
SCALE: 3/4"=1'-0" 0 1' 2' 3'

3

4

- NOTES:
- OPTICS PLATFORM, LADDER, AND PILES NOT SHOWN FOR CLARITY.
 - CENTRAL TUBE, IN CONJUNCTION WITH A TEMPORARY POSITIONING PILE (NOT SHOWN) SHALL BE USED TO LOCATE THE NEW TOWER STRUCTURE AND TO ORIENT/TEMPORARILY SUPPORT THE JACKET DURING BATTER PILE INSTALLATION. REMOVE THE TEMPORARY POSITIONING PILE ONCE THE BATTER PILES AND JACKET HAVE BEEN GROUTED.



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DRAWN BY:	SND
EDITED BY:	SND
CHECKED BY:	NJE

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

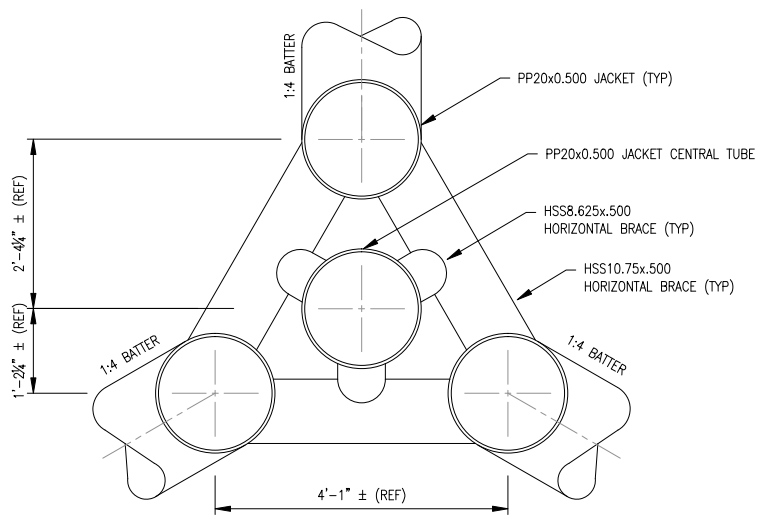
HS17B REBUILD CHRISTIANSTED HARBOR CHANNEL LIGHTS
USCG ANT PUERTO RICO
ST. CROIX USVI

STRUCTURAL JACKET SECTIONS AND DETAIL

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
M.A. BRAXTON	E. SAN	M.J. LESINSKI
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

M.J. LESINSKI APPROVING OFFICER	DATE
------------------------------------	------

PROJECT NUMBER	DRAWING NUMBER
10251739	M2329-D
DISCIPLINE/SHT NO	SHEET 10 OF 13
S-05	

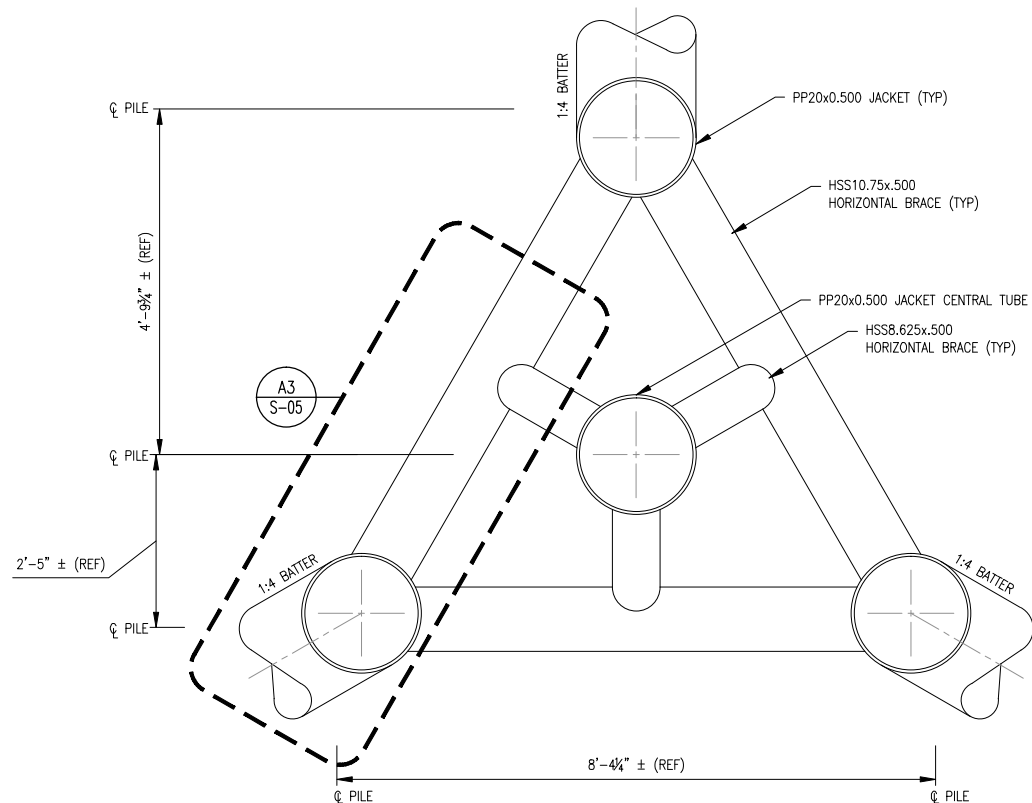


SECTION
CENTERLINE OF TOP BRACE

B1
S-05

SCALE: $\frac{3}{4}" = 1' - 0"$

0 1' 2' 3'

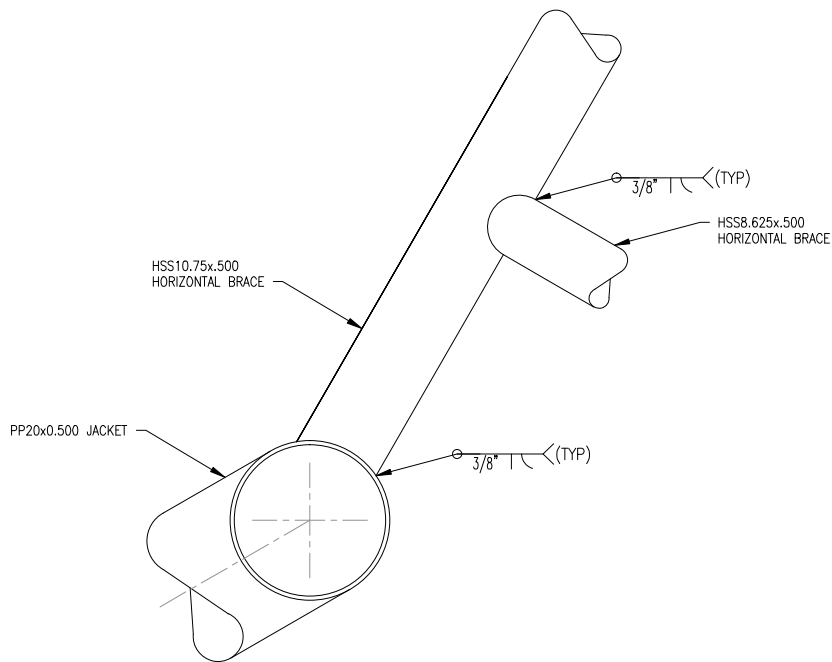


SECTION
CENTERLINE OF BOTTOM BRACE

A1
S-05

SCALE: $\frac{3}{4}" = 1' - 0"$

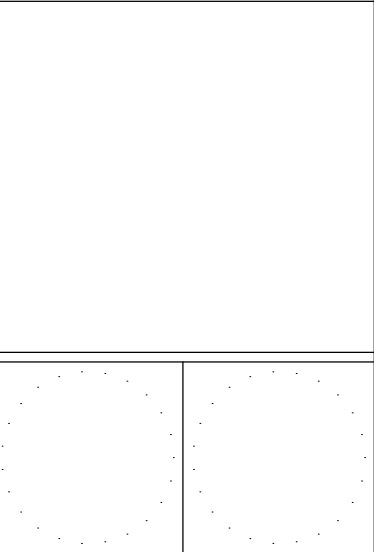
0 1' 2' 3'



BRACING CONNECTION

95% SUBMISSION

CONSULTANTS



U. S. COAST GUARD
CIVIL ENGINEERING UNIT
MIAMI



USCG. CEU MIAMI
15608 SW 117TH AVE
MIAMI, FLORIDA 33177

ISSUE		
MARK	DATE	DESCRIPTION

A/E PROJECT NO: 8021		
CAD FILE NAME: M2329-D C02.DWG		
DESIGNED BY: LAH		
DRAWN BY: SND		
EDITED BY: SND		
CHECKED BY: NJE		

SCALE: AS SHOWN	PLOT SCALE: 1:1
SHEET TITLE	

HS17B REBUILD CHRISTIANSTED HARBOR CHANNEL LIGHTS
USCG ANT PUERTO RICO
ST. CROIX USVI

STRUCTURAL
DETAILS-1

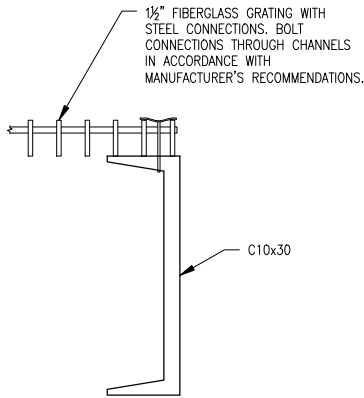
REVIEWED BY: M.A. BRAXTON	REVIEWED BY: E. SAN	REVIEWED BY: M.J. LESINSKI
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

M.J. LESINSKI APPROVING OFFICER	DATE
------------------------------------	------

PROJECT NUMBER	DRAWING NUMBER
10251739	M2329-D
DISCIPLINE/SHT NO	SHEET 11 OF 13
S-06	

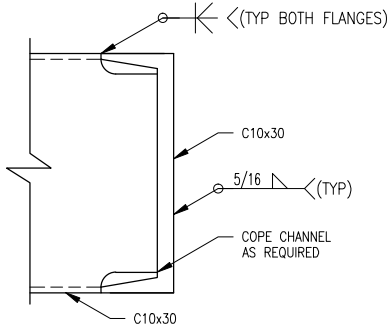
95% SUBMISSION

1



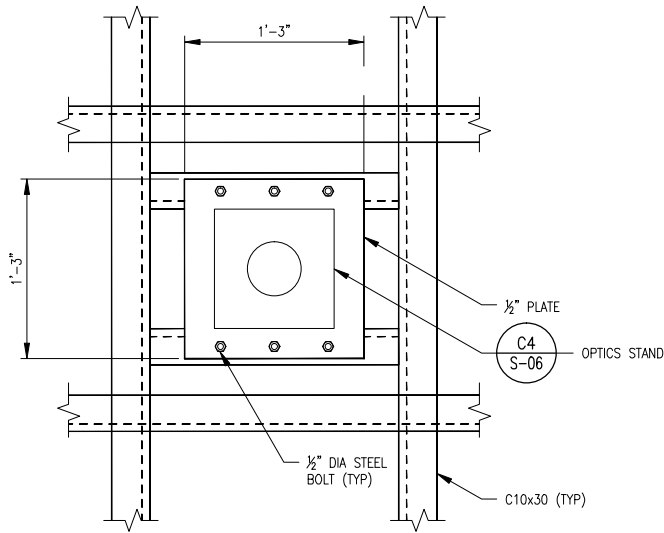
C1 GRATING CONNECTION
SCALE: 3"=1'-0" 0 3' 6' 9'

2



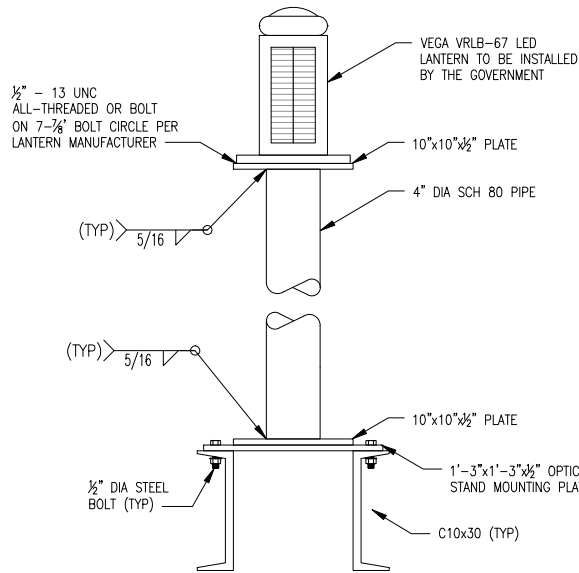
C2 PLATFORM FRAME CONNECTION
SCALE: 3"=1'-0" 0 3' 6' 9'

3



C3 OPTICS STAND MOUNTING DETAIL
SCALE: 1 1/2"=1'-0" 0 1/2' 1' 1 1/2'

4



C4 OPTICS STAND
SCALE: 1 1/2"=1'-0" 0 1/2' 1' 1 1/2'

NOTE:

- HEIGHT OF STAND MUST ACCOMMODATE SPECIFIED FOCAL HEIGHT OF EACH ATON.

C

C

B

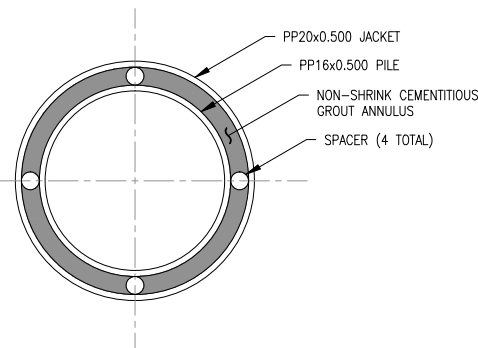
B

B1 HANDRAIL ELEVATION
SCALE: 1"=1'-0" 0 1/2' 1' 2'

B2 HANDRAIL CONNECTION
SCALE: 3"=1'-0" 0 3' 6' 9'

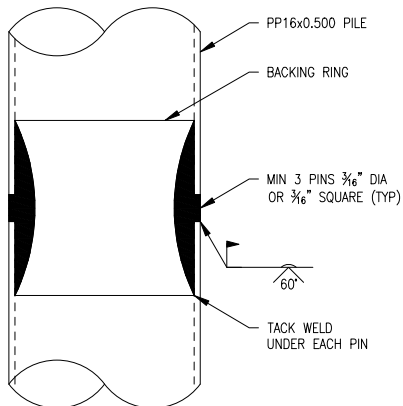
B3 SECTION HANDRAIL CONNECTION
SCALE: 3"=1'-0" 0 3' 6' 9'

A



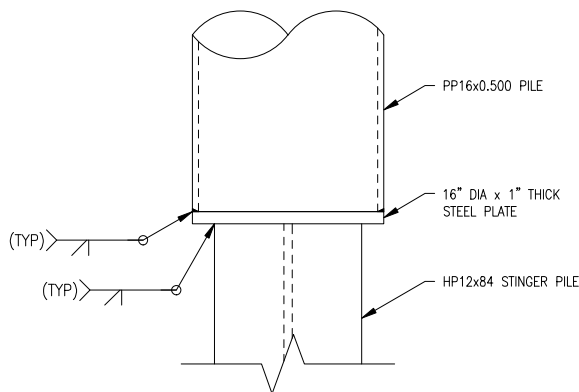
A1 JACKET AND PILE GROUT CONNECTION
SCALE: 1 1/2"=1'-0" 0 1/2' 1' 1 1/2'

2



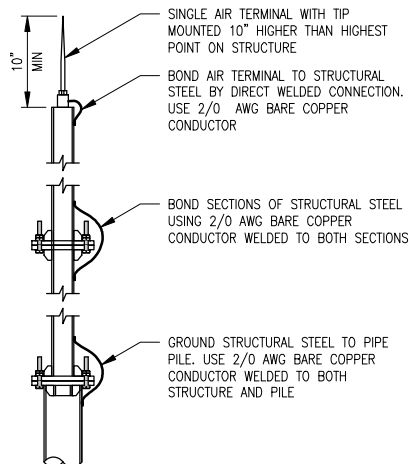
A2 PILE SPLICE DETAIL
SCALE: 1 1/2"=1'-0" 0 1/2' 1' 1 1/2'

3

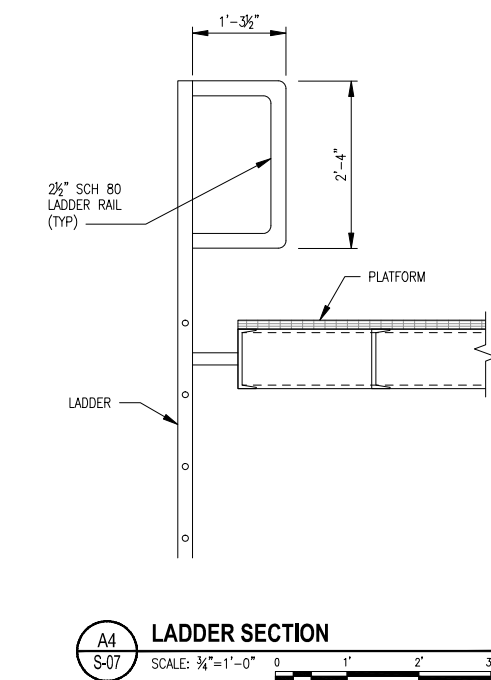
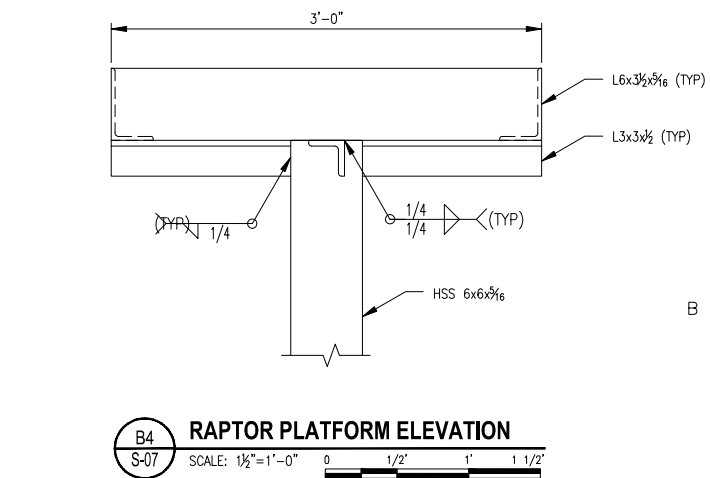
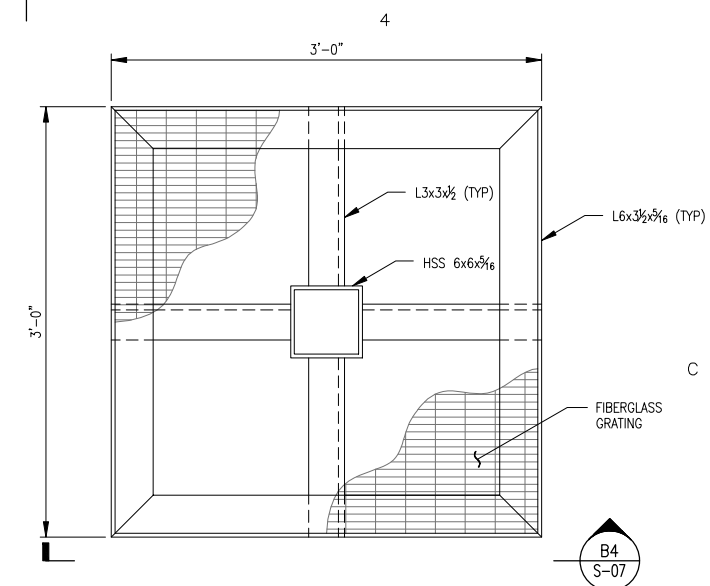
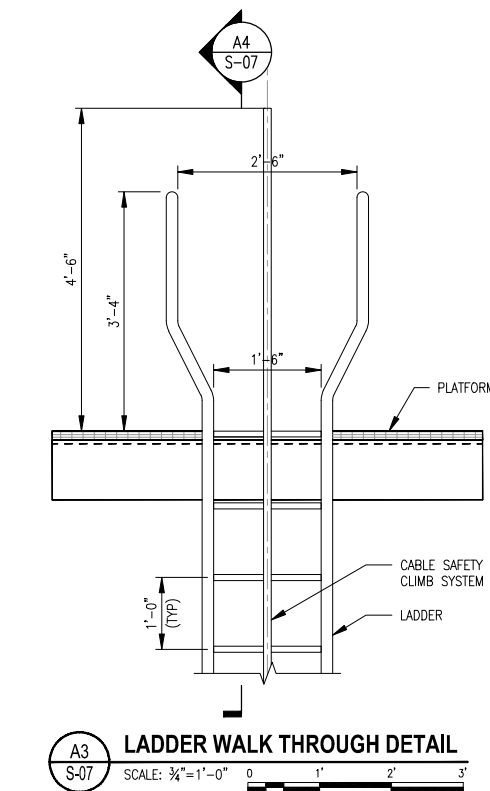
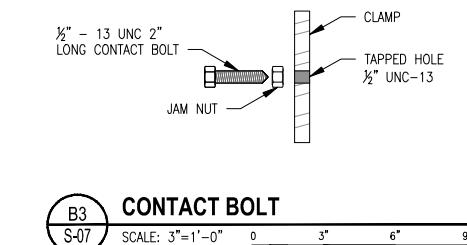
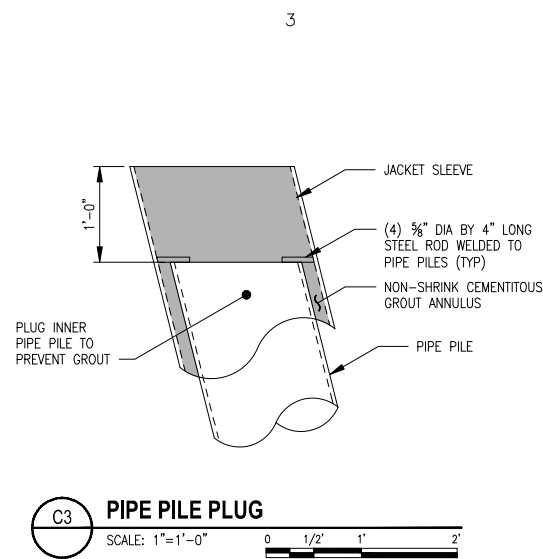
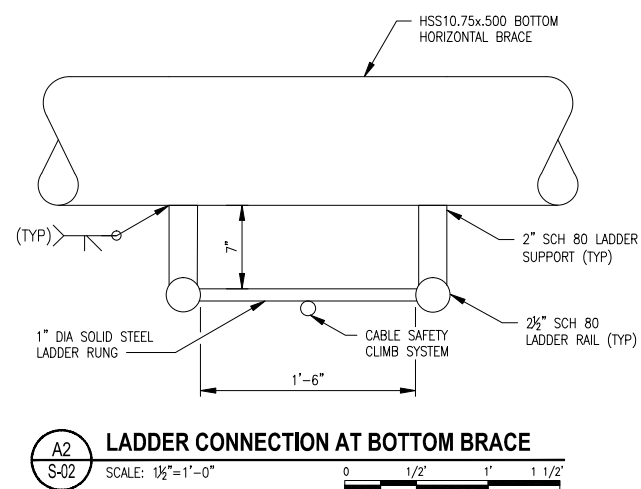
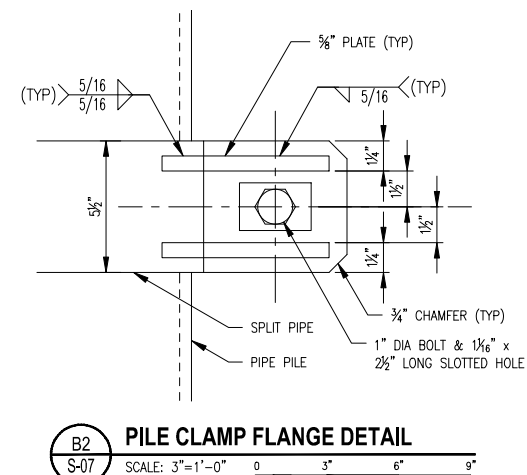
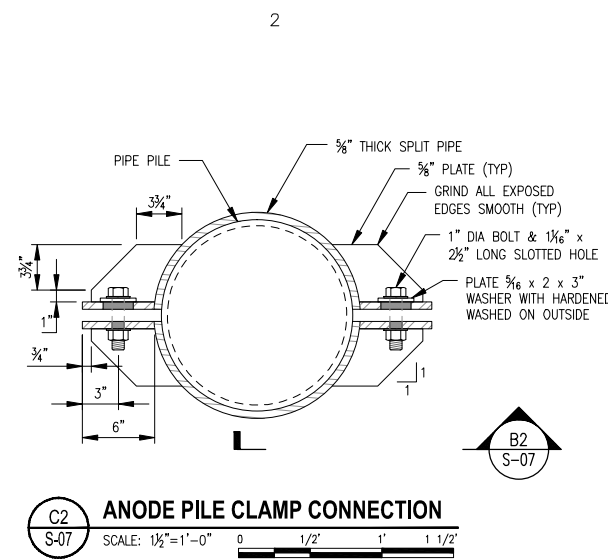
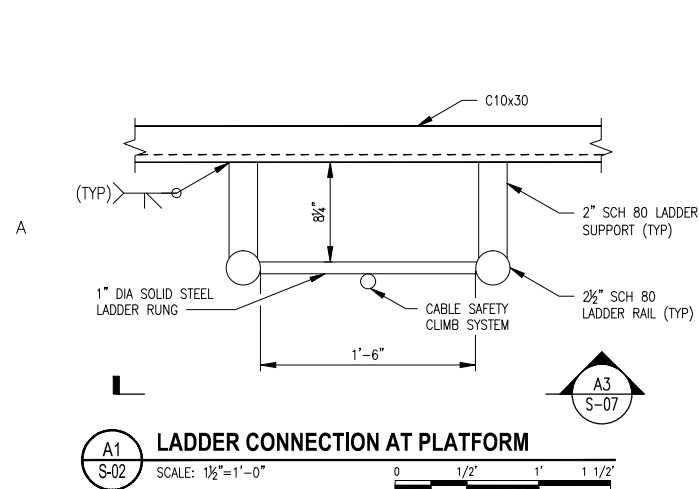
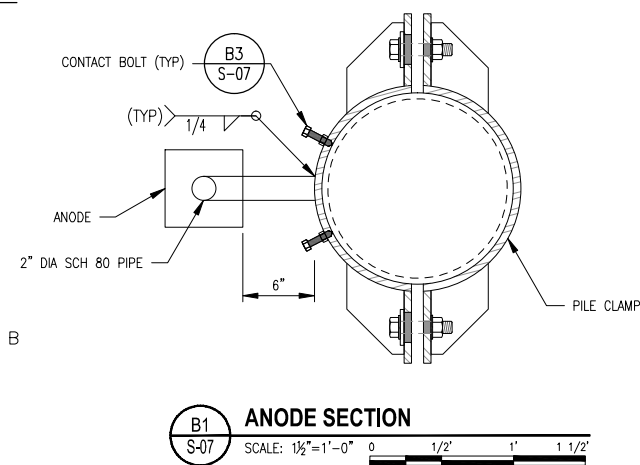
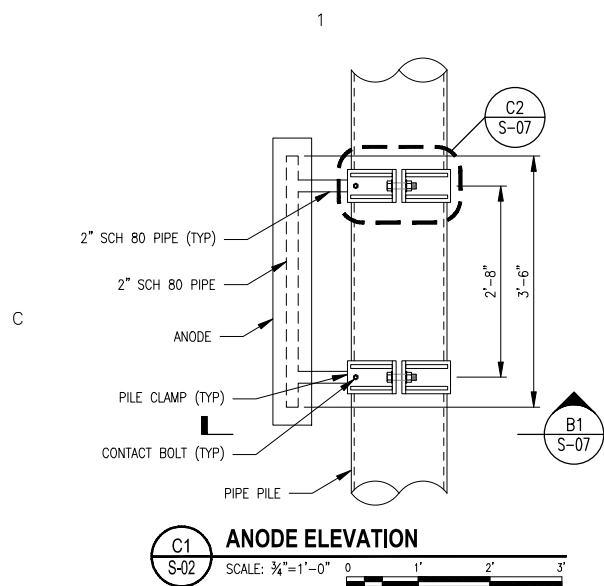


A3 STINGER PILE CONNECTION
SCALE: 1 1/2"=1'-0" 0 1/2' 1' 1 1/2'

4

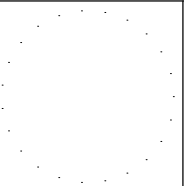


A4 LIGHTNING PROTECTION
SCALE: NTS



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CIVIL ENGINEERING UNIT
MIAMI



USCG. CEU MIAMI
15608 SW 117TH AVE
MIAMI, FLORIDA 33177

ISSUE

MARK	DATE	DESCRIPTION

A/E PROJECT NO:	8021
CAD FILE NAME:	M2329-D C02.DWG
DESIGNED BY:	LAH
DRAWN BY:	SND
EDITED BY:	SND
CHECKED BY:	NJE

SCALE: AS SHOWN PLOT SCALE: 1:1

SHEET TITLE

HS17B REBUILD CHRISTIANSTED HARBOR CHANNEL LIGHTS
USCG ANT PUERTO RICO
ST. CROIX USVI

STRUCTURAL DETAILS-3

REVIEWED BY:	REVIEWED BY:	REVIEWED BY:
M.A. BRAXTON	E. SAN	M.J. LESINSKI
PROJECT ENG.	BRANCH CHIEF	TECH. DIRECTOR

M.J. LESINSKI	
<hr/> APPROVING OFFICER	<hr/> DATE

PROJECT NUMBER

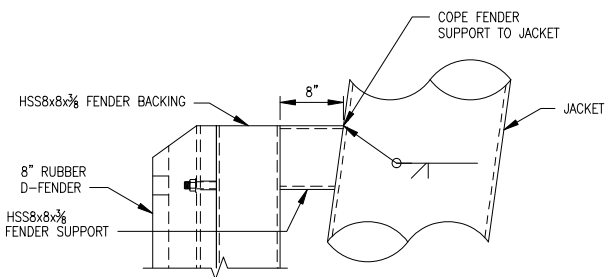
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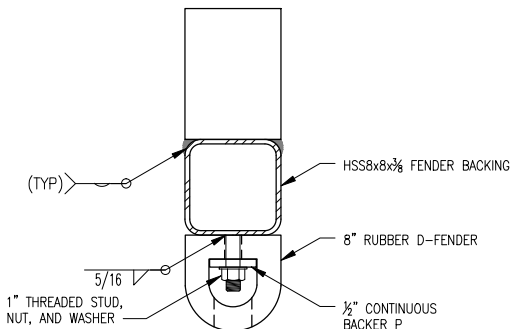
M2329-D

DISCIPLINE/SHT N

SHEET 13 OF 13

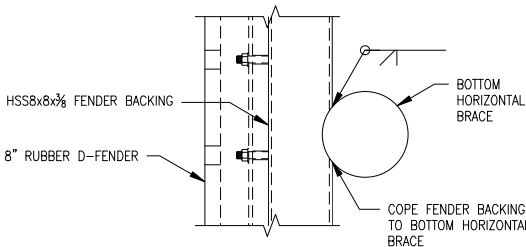


TOP FENDER CONNECTION



D-FENDER CONNECTION

SCALE: $1\frac{1}{2}" = 1' - 0"$ 0 1/2' 1' 1 1/2'



BOTTOM FENDER CONNECTION